

CLAIMS

1. Apparatus for programming a broadcast signal recorder, comprising:

at a broadcaster location:

5 information receiving means for receiving information identifying a recorder at a recorder location and a program or program type to be recorded by the recorder;

generating means coupled to the information receiving means for generating an output signal containing
10 information identifying the recorder and the program or program type to be recorded by the recorder;

multiplexing means coupled to the generating means for multiplexing the output signal with a broadcast signal; and

15 transmitting means coupled to the multiplexing means to transmit the multiplexed signal;

at a recorder location:

a broadcast signal recording device;

signal receiving means for receiving the transmitted
20 multiplexed signal;

decoder means coupled to the signal receiving means for separating the transmitted multiplexed signal into a broadcast signal and a data signal containing information identifying a recorder and the program or program type to
25 be recorded by the recorder;

address detector means coupled to the decoder means for detecting when the information identifying a recorder in the data signal identifies that particular recorder at the recorder location;

30 program data store means coupled to the address detector means and operative when the address detector means determines that the recorder identifying information

in the data signal identifies that particular recorder at the recorder location to store the program or program type identifying information; and

means coupled to the program data store means for
5 determining whenever a program or program type identified by the stored information is being transmitted and in response thereto to activate the broadcast signal recording device; and

at a user location remote from the recorder location
10 and the transmitter station:

user-operable means for transmitting to the broadcaster location information identifying a recorder at a recorder location and a program or program type to be recorded by the recorder.

15 2. Apparatus according to claim 1, in which the broadcast signal is a broadcast television signal.

3. Apparatus according to claim 1, in which the user-operable means at the user location comprises a personal computer.

20 4. Apparatus according to claim 1, in which the user-operable means at the user location comprises a mobile telephone.

5. Apparatus according to claim 1, in which the user-operable means transmits to the broadcaster location
25 by means of a computer network, preferably the internet.

6. Apparatus according to claim 1, in which the user-operable means transmits to the broadcaster location by means of telephone communication.

7. Apparatus according to claim 1, in which the broadcast signal is a digital signal and the transmitting means is constructed to transmit a digital signal.

8. Apparatus according to claim 1, in which the generating means is arranged to repeat the individual output signal.

9. Apparatus according to claim 8, in which the generating means is arranged to vary the number of repeats in dependence upon the number of items of information to be transmitted.

10. Apparatus according to claim 1, in which the broadcast signal recording device is a tape recorder.

11. Apparatus according to claim 1, in which the broadcast signal recording device is a hard disk recorder.

12. Apparatus according to claim 1, in which the means for determining whenever a program or program type identified by the stored information is being transmitted is arranged to compare timing information stored in the program data store means with current time information.

13. Apparatus according to claim 1, in which the means for determining whenever a program or program type identified by the stored information is being transmitted

is arranged to detect received program delivery codes in the signal received at the receiver location and to compare the received codes with codes stored in the program data store means.

5 14. Apparatus according to claim 1, in which the information receiving means at the broadcaster location includes means for receiving a user identification from the user.

10 15. Apparatus according to claim 14, in which the information receiving means includes means for issuing a new user with a unique user identification.

16. Apparatus according to claim 14, in which the address detector means at the recorder location is incorporated with a conditional access enabling device.

15 17. Apparatus according to claim 1, in which at the recorder location the means for activating the broadcast signal recording device is operative to tune the broadcast signal recording device to a reception channel when a program is to be recorded, and, after the program has been
20 recorded, to retune the broadcast signal recording device to a predetermined default channel to receive the data signal again.

25 18. Apparatus according to claim 1, in which the generating means at the broadcaster location includes means containing schedule information and for transmitting the schedule information to a user, and in response to

user selection, generating the output signal containing information identifying programs to be recorded.

19. A method of programming a broadcast signal recorder, comprising the steps of:

- 5 at a user location:
- transmitting, in response to user input, information identifying a recorder at a recorder location and a program or program type to be recorded by the recorder;
- at a broadcaster location:
- 10 receiving from the user location information identifying the recorder and a program or program type to be recorded by the recorder;
- generating from the received information an output signal containing information identifying the recorder and
- 15 the program or program type to be recorded by the recorder;
- multiplexing the output signal with a broadcast signal; and
- transmitting the resultant multiplexed signal; and
- 20 at a recorder location:
- receiving the transmitted multiplexed signal;
- separating the transmitted multiplexed signal into a broadcast signal and a data signal containing information identifying a recorder and the program or program type to
- 25 be recorded by the recorder;
- detecting when the information identifying a recorder in the data signal identifies that particular recorder location;
- storing, when the address detector means determines
- 30 that the recorder identifying information in the data signal identifies that particular recorder at the recorder

location, the program or program type identifying information; and

determining whenever a program or program type identified by the stored information is being transmitted
5 and in response thereto activating the broadcast signal recording device.

20. Apparatus for transmitting a multiplexed broadcast signal, the apparatus comprising:

information receiving means for receiving information
10 identifying a recorder at a recorder location and a program or program type to be recorded by the recorder;

generating means coupled to the information receiving means for generating an output signal containing information identifying the recorder and the program or
15 program type to be recorded by the recorder;

multiplexing means coupled to the generating means for multiplexing the output signal with a broadcast signal; and

transmitting means coupled to the multiplexing means
20 to transmit the multiplexed signal.

21. Apparatus for programming a broadcast signal recording device, the apparatus comprising:

a broadcast signal recording device;
signal receiving means for receiving a transmitted
25 multiplexed signal;

decoder means coupled to the signal receiving means for separating the transmitted multiplexed signal into a broadcast signal and a data signal containing information identifying a recorder and the program or program type to
30 be recorded by the recorder;

address detector means coupled to the decoder means for detecting when the information identifying a recorder in the data signal identifies that particular recorder at the recorder location; and

5 program data store means coupled to the address detector means and operative when the address detector means determines that the recorder identifying information in the data signal identifies that particular recorder at the recorder location to store the program or program type
10 identifying information; and

means coupled to the program data store means for determining whenever a program or program type identified by the stored information is being transmitted and in response thereto activating the broadcast signal recording
15 device.

22. A digital multiplexed broadcast signal comprising a digital broadcast signal, multiplexed with a data signal, the data signal containing addresses identifying individual signal recorders and containing information
20 associated with the addresses identifying programs or program types to be recorded by the recorders.

23. A signal according to claim 22, in which the digital broadcast signal comprises a digital video signal.

24. Apparatus for programming a video recorder,
25 comprising:

at a broadcaster location:
information receiving means for receiving information identifying a recorder at a recorder location;

generating means coupled to the information receiving means and including means containing schedule information and for transmitting the schedule information to a user, and, in response to user selection, generating a data
5 output signal containing information identifying the recorder and at least one video item to be recorded by the recorder; and

transmitting means for transmitting the data output signal and for transmitting video items; and

10 located remotely from the broadcaster location:

a video signal recording device;

signal receiving means for receiving the transmitted video items;

15 data store means for receiving and storing the data output signal for that recorder from the generating means at the broadcaster location;

means coupled to the data store means for determining whenever a video item identified by the stored information is being transmitted and in response thereto activating
20 the video signal recording device; and

user-operable means for transmitting to the broadcaster location information identifying a recorder at a recorder location, for receiving schedule information transmitted from the generating means at the broadcaster
25 location, and for sending user selections from the transmitted schedule information to the broadcaster to identify video items to be recorded by the recorder at the recorder location.

25. Apparatus according to claim 24, in which the video
30 signal recording device comprises a personal computer.

26. Apparatus according to claim 24, in which the user-operable means comprises a mobile telephone.

27. Apparatus according to claim 24, in which the user-operable means transmits to the broadcaster location
5 by means of a computer network, preferably the internet.

28. Apparatus according to claim 27, in which the user-operable means comprises a personal computer.

29. Apparatus according to claim 24, in which the video items are transmitted in digital form.

10 30. Apparatus according to claim 24, in which the broadcast signal recording device comprises a hard disk recorder.

31. A method of programming a video recorder, comprising the steps of:

15 transmitting to a broadcaster location, in response to user input, information identifying a video recorder at a recorder location;

receiving, at a broadcaster location, from the user, the location information identifying the recorder and
20 transmitting to the user schedule information;

sending from the user to the broadcaster location user selections to identify video items to be recorded by the recorder;

generating from the received user selections a data
25 output signal containing information identifying the recorder and at least one video item to be recorded by the recorder;

transmitting the data output signal and transmitting
the video items;

receiving and storing the data output signal at the
recorder;

5 receiving the transmitted video items at the
recorder;

determining whenever a video item identified by the
stored data is being transmitted and in response thereto
activating the recorder.